REMARKS

Status of Claims

A preliminary amendment was filed November 9, 2005, in which claims 1, 4-9, 14-22, 25, 26, 28, 31-33, 35-37, 43, 44, 49-51, 56, and 57 were amended; and claims 34, 38-42, and 45-48 were canceled.

Claims 1-33, 35-37, 43, 44, and 49-57 are pending in the present application.

Claims 1-57 have been made subject to a restriction requirement due to a presumed error by the Office.

By way of this amendment, claims 8, 9, and 53 have been amended.

Upon entry of this amendment, claims 1-33, 35-37, 43, 44, and 49-57 will be pending.

Summary of the Amendment

Claims 8, 9, and 53 were amended to correct obvious typographical errors. Support for the amendment is found throughout the specification and claims as originally filed.

No new matter has been added.

Pending Claims

Applicants note that a preliminary amendment was filed with the Office in compliance with 37 CFR § 1.115 on November 9, 2005. In that amendment, claims 1, 4-9, 14-22, 25, 26, 28, 31-33, 35-37, 43, 44, 49-51, 56, and 57 were amended; and claims 34, 38-42, and 45-48 were canceled. A section entitled "Cross-Reference to Related Applications" was added to the specification.

Despite the submission of this amendment, the Office has evaluated claims 1-57. Applicants assume that the Office entered the amendment but evaluated the content of claims 1-57 through a mere oversight. For clarity and thoroughness, the content of the claims has been recapitulated here as if the Preliminary Amendment filed with the Office on November 9, 2005,

was entered. Applicants respectfully request confirmation that the Amendment filed with the Original Application on November 13, 2005, and request withdrawal of any restriction requirement applied to amended or canceled subject matter.

Restriction Requirement

The Office has allegedly identified three different inventions as follows:

Group 1 (claims 1-26 and 45-53 as originally filed): drawn to a method of treating an individual who has cancer/inducing apoptosis in vivo in a cancer cell;

Group 2 (claims 27-44 as originally filed): drawn to a method of inducing apoptosis in a cancer cell in vitro;

Group 3 (claims 54-57 as originally filed): drawn to a method of identifying a compound with anticancer activity in vitro.

The Office asserts that the groups of inventions lack unity of invention under PCT Rule 1.3 in view of the Groups as evidenced by US Pat. No. 5,447,954 (hereinafter "Gribble"). Applicants traverse the rejection and respectfully disagree.

As a preliminary matter, Applicants note that the Preliminary Amendment filed November 9, 2005, was not analyzed by the Office prior to the issuance of the instant Restriction Requirement. The amendment of November 9, 2005, included amendments to claims 1, 4-9, 14-22, 25, 26, 28, 31-33, 35-37, 43, 44, 49-51, 56, and 57 that may have an impact on the groupings outlined by the Office above. Applicants therefore formally object to the Restriction Requirement as improper and request that the Restriction Requirement be withdrawn in lieu of examination of the correctly pending claims.

The Restriction requirement is also improper on its face because the Office has inappropriately read a limitation into the claims of Group II that is not found in all of the claims of that Group. Claim 27 recites a method of inducing apoptosis in a cancer cell wherein said cancer comprises cells that are not dependent on endogenously synthesized fatty acid, comprising the step of delivering to said cancer cell an amount of an ATP citrate lyase inhibitor

effective to induce apoptosis in said cell. Claim 27 does not require that the method be performed in vitro. Therefore, Group II is improperly restricted to in vitro methods. Applicants respectfully request that the restriction requirement be withdrawn.

Applicants assert that the Restriction requirement is improper because Gribble fails to disclose one of the common inventive concepts of the instant invention. The application relates to the discovery that compounds disclosed in the specification can kill cancer cells characterized by metabolic dysfunction Gribble does not teach or suggest the ability of compounds to kill cancer cells characterized by a metabolic dysfunction. Gribble does not teach or suggest any anticancer activity, much less a method of treating an individual who has cancer comprising the steps of identifying said cancer as a cancer that comprises cancer cells that have a high rate of aerobic glycolysis, and subsequently administering to said individual a therapeutically effective amount of a composition selected from the group consisting of: an ATP citrate lyase inhibitor, and a tricarboxylate transporter inhibitor Gribble does not teach or suggest a method of inducing apoptosis in a cancer cell, much less a method of doing so wherein said cancer comprises cells that are not dependent on endogenously synthesized fatty acid, comprising the step of delivering to said cancer cell an amount of an ATP citrate lyase inhibitor effective to induce apoptosis in said cell. Gribble does not teach or suggest a method of identifying a compound with anticancer activity. Therefore a rejection lack unity of invention under PCT Rule 1.3 in view of the Groups as evidenced by Gribble is improper.

Applicants urge that the claimed subject matter is novel and inventive over Gribble. Anticancer activity of the compounds was not known prior to the filing of this application. Methods of using the compounds of Gribble cannot be equated to the compounds themselves. Applicants urge that methods of treating an individual with cancer of the claimed invention, methods of inducing apoptosis in a cell with compounds of the claimed invention, and methods of identifying compounds with anticancer activity with the compounds of the claimed invention would not cause an undue burden on the Office because the methods require searching of the same body of art. Applicants respectfully request that the restriction requirement be withdrawn.

The Office has further asserted that the claims are subject to a species election in addition to the restriction requirement. Applicants urge that species election based upon the type of compounds or cancer cells affected by those compounds would be improper because: (1) the activity of the claimed methods are not necessarily limited to one cancer cell or one type of anticancer compound; and (2) there are multiple generic claims related to the species identified by the examiner (i.e. claims 1 and 28). Applicants respectfully request that the requirement for a species election be withdrawn.

Applicants provisionally elect Group I, with the species election of (a) glioblastoma cells as a set of cancer cells; (b) hydroxycitrate as an ATP citrase lyase inhibitor; and (c) phosphoenolpyruvate as a tricarboxylate transporter inhibitor.

Conclusion

Claims 1-33, 35-37, 43, 44, and 49-57 are in condition for allowance. A notice of allowance is earnestly solicited. Applicants invite the Examiner to contact the undersigned at 610.640.7855 to clarify any unresolved issues raised by this response.

As indicated on the transmittal accompanying this response, the Commissioner is hereby authorized to charge any debit or credit any overpayment to Deposit Account No. 50-0436.

Respectfully Submitted,

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